Appl. No. 09/988,438
Amdt. dated February 13, 2006
Reply to Office Action of September 23, 2005

REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed September 23, 2005. Claims 1-5 were pending in the present application. This Amendment amends claims 1 and 2, cancels claims 3-5, and adds new claims 6-21, leaving pending in the application claims 1, 2, and 6-21. Reconsideration of the rejected claims and consideration of the newly presented claims is respectfully requested.

I.   Rejection under 35 U.S.C. §101

Claims 1-5 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claims 3-5 are canceled. Claims 1 and 2 as amended now recite steps of a data transcribing method, and as such should constitute statutory subject matter. Applicants therefore respectfully request that the rejection with respect to claims 1-2 be withdrawn.

II.   Rejection under 35 U.S.C. §102

Claims 1-5 are rejected under 35 U.S.C. §102(e) as being anticipated by *Corbin* (US 6,594,823). Applicants respectfully submit that *Corbin* does not disclose or suggest all elements of these claims.

Corbin discloses representing a data structure of a <u>high-level programming language</u> with a mark-up language, such as XML, as well as translating a data structure represented with a mark-up language to an arbitrary high-level programming language structure. (See, for example, claims 1, 8, 20 and 41; col. 1, lines 15-28). *Corbin* expresses <u>a data structure</u> with an XML element. The invention recited in Applicants' claims 1 and 2, however, expresses the <u>data itself</u> with XML, and as such can handle the conversion between data consisting mainly of fixed-length data fields, such as COBOL fields, and data consisting of variable-length data fields and variable-time iterations such as XML, which cannot be handled by *Corbin*.

The conventional method includes the problems as follows as described from page 28, line 19 of the Applicants' specification. Assume one example in which a data field in a COBOL program is defined as having a fixed-length of 80 characters, the data corresponding to an

element in XML data. If the XML element has 100 characters in length and the XML element is converted into a COBOL data structure, the first 80 characters are converted into COBOL data. After the conversion, the COBOL data includes only 80 characters and any information on the original data length, or the cut-off data length, can not be obtained from the after-conversion data item. If the XML element has 50 characters in length and the XML element is converted into a COBOL data structure, the top 50 characters of the COBOL data is filled with the characters in XML element and the remainder of the COBOL data is filled with blank characters in accordance with the COBOL data transcription rules. In this case, any information on the original data length can not be obtained from the after-conversion data item. (It is impossible to know if the original data has 50 characters only, or if the original data has 50 characters and there are 30 blank characters.)

Further, assume the case of array elements having different iteration numbers. Assume an array having 100 iterations in COBOL. If the original XML element having a certain iteration number is converted to the COBOL array, any information on the iteration number of original XML element cannot be obtained from the after-conversion data item.

Further, XML allows defining an omissible element while COBOL can not define such an omissible data item. When any XML omissible element is omitted, the corresponding COBOL data item is filled with a blank character. In this case, any information on the original XML element cannot be obtained from the converted COBOL data item. (It is impossible to know if the original data element has 0-length character or if the original data element is omitted.)

There is no limitation on data content in XML element, while COBOL has limitations on data content. If an XML element includes such data, the COBOL data cannot represent such data correctly.

Assume the conversion from a data structure in a COBOL program into XML format. In this case, there is no means to specify the data length and the iteration number in COBOL. As mentioned above, COBOL defines data in fixed lengths. When the COBOL data item has an 80 character length, it is impossible to convert only part (for example, the top 50 characters) of the COBOL data item into XML element data. If the COBOL array data is defined with 100

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iterations, it is impossible to specify converting only the top 50 iterations of COBOL array into XML data.

Assume the case in which only a part of XML document is necessary for data processing. The whole XML document structure should be prepared for converting into COBOL. This is a waste of memory, time, and computer resources.

As mentioned above, the XML array data allows for a varying iteration number, while COBOL has only a fixed-iteration number. COBOL should prepare the maximum possible iteration array, even when the XML array actually has only five iterations.

In the invention of Applicants' claims 1-2, if data in the first format cannot be converted into data in the second format, information on the original data and on the conversion error is recorded using the flag structure, and such information can be obtained from the flag structure after completing the conversion. When converting the structure in a program language into the structured document, the flag structure can specify the partial data stored in the data item for conversion and can specify the iteration item range to be converted in the iteration item in the program language structure (page 30, lines 2 to 24).

In the claims as amended, the flag structure is described as a "transcription state storing structure," which describes the function of the flag structure as mentioned above.

It is asserted in the Office Action that *Corbin* shows the flag structure at column 5, lines 35-67 and column 6, lines 22-34. It is respectfully submitted that those parts relate to a "master-slave" structure of the machines for performing distributed processing. The status means the status of the machine, such as idle, busy, or waiting status, and the status is used to control the distributed processing. Those parts show how to encode such a control element and do not relate to any information relating to the data conversion. The Applicants' claimed invention, on the other hand, makes it possible to perform partial conversions between the program language and the structure document, multiple times, using the flag structure.

Accordingly, the invention recited in Applicants' claims 1-2 is different from *Corbin*, in conversion approach, in having the "transcription state storing structure," and in having the flexible element conversion function and the partial conversion function. As *Corbin* does not disclose or suggest such limitations, *Corbin* cannot anticipate Applicants' claims 1-2. Applicants

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therefore respectfully request that the rejection with respect to claims 1-2 be withdrawn.

III. Amendment to the Claims

Unless otherwise specified, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the specification and do not add new matter to the specification.
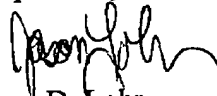
IV. Newly Presented Claims

Claims 6-21 have been added to cover different aspects of the present invention. These claims are supported by the specification and do not add new matter. Applicants therefore respectfully request consideration of newly presented claims 6-21.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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